

CAREER INDECISION AMONGST PROSPECTIVE UNIVERSITY STUDENTS

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STATEMENT

I, the undersigned, hereby declare that the work contained in this thesis is my own original work, and that I have not previously in its entirety or in part submitted it at any university for a degree.

The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the National Research Foundation.

This work is the result of a research project, which is of the same extent as that required for master's theses.

It is a rule of the Department of Psychology that the report of the research may take the form of an article, which is ready for submission for publication to a scientific journal.

SUMMARY

The numerous prospective university students who present at the Centre for Student Counselling of the University of Stellenbosch for guidance in selecting an occupation or university course, suggest that there is a high level of career indecision amongst such individuals. With the purpose of addressing career indecision, the present study examined the nature thereof amongst prospective university students. The prevalence of specific aspects of career maturity (namely, self-information, decision-making, career information, integration of self-information and career information, and career planning) underlying career indecision were investigated, as well as the correlations between these aspects. In addition, the correlations between the aspects of career maturity and certain biographical variables such as gender, home language, declared career choice, differentiation of interests, and self-reported level of career indecision were examined. Eighty-four prospective students, who presented for career counselling at the Centre for Student Counselling of the University of Stellenbosch, served as subjects in the study. The subjects completed the Career Development Questionnaire (CDQ), the Meyer Interest Questionnaire (MB-10) and a biographical questionnaire compiled by the researcher. The results of the study indicated that a substantial number of prospective university students experience career indecision. There were statistically significant correlations ($p < 0,01$) between the 5 scales of the CDQ. In addition, there were statistically significant correlations ($p < 0,01$) between the 5 scales of the CDQ, and self-reported level of career indecision. There were no clinically significant correlations between gender and home language, and any other variable measured. An attempt was made to address career indecision amongst the population group by making certain recommendations regarding the content and process of career counselling for prospective university students.

OPSOMMING

Die aantal voornemende universiteitstudente wat by die Sentrum vir Studentevoorligting aan die Universiteit van Stellenbosch aanmeld vir voorligting in verband met die keuse van 'n beroep of universiteitskursus, is aanduidend van 'n hoë mate van beroepsbesluitloosheid onder die individue. Die onderhawige studie ondersoek die aard van beroepsbesluitloosheid onder voornemende universiteitstudente ten einde die beroepsbesluitloosheid aan te spreek. Die voorkoms van sekere komponente van loopbaanvolwassenheid (naamlik selfinligting, besluitneming, loopbaaninligting, integrering van selfinligting en loopbaaninligting, en loopbaanbeplanning) onderliggend aan beroepsbesluitloosheid is ondersoek, sowel as die verband tussen die komponente. Die verband tussen die komponente van loopbaanvolwassenheid en verskeie biografiese veranderlikes soos geslag, huistaal, verklaarde loopbaankeuse, onderskeiding van belangstellings, en self-gerapporteerde vlak van beroepsbesluitloosheid is ook ondersoek. Vier-en-tagtig voornemende studente wat by die Sentrum vir Studentevoorligting aan die Universiteit van Stellenbosch aangemeld het vir beroepsvoorligting, is by die studie betrek. Die subjekte het die Loopbaanontwikkelingsvraelys (LOV), die Meyer-Belangstellingsvraelys (MB-10) asook 'n biografiese vraelys wat deur die navorser opgestel is, voltooi. Die resultate het getoon dat 'n aansienlike hoeveelheid voornemende studente beroepsbesluitloosheid ervaar. Daar was statisties beduidende verbande ($p < 0,01$) tussen die 5 skale van die LOV. Verder was daar statisties beduidende verbande ($p < 0,01$) tussen die 5 skale van die LOV en gerapporteerde vlak van beroepsbesluitloosheid. Daar was geen klinies betekenisvolle verbande tussen geslag en huistaal, en enige ander veranderlike nie. Daar is gepoog om beroepsbesluitloosheid onder voornemende studente aan te spreek deur aanbevelings te maak in verband met die inhoud en prosedure van loopbaanvoorligting vir voornemende universiteitstudente.

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"There can be no finer subject for discussion than the question of what a (man) should be like and what occupation (he) should engage in and how far (he) should pursue it, both in earlier and later life".

Socrates (quoted in Spokane & Oliver, 1983, p.99)

1. INTRODUCTION

The term career indecision has been widely used with reference to problems relating to career development, particularly problems in making career-related decisions (Rojewski, 1994). Career indecision in the context of university students has been defined as the inability to select a university major or occupation (Callahan & Greenhaus, 1992).

Rojewski (1994) stated that career indecision has become an increasingly important construct in the theory, research and practice of career development. According to Greenhaus and Callahan (1992) career indecision has for many years been recognised as significant in the contexts of high school and college students.

Studies on career indecision, career development and career interventions have been numerous and diverse. Yet many researchers advocate the need for further research and interest in this field (Beerlall, 1997; Cohen, Chartrand & Jowdy, 1995; De Bruin & Nel, 1996; Fouad, 1994; Fukuyama, Probert, Neimeyer, Nevill & Metzler, 1988; Fuqua, Blum & Hartman, 1988; Lucas, 1993; Naicker, 1994b; Newman, Fuqua & Minger, 1990; Niles, 1997; Rojewski, 1994; Whiston, 1996). De Bruin and Du Toit (1997) maintained that the high psychological and financial costs which may be caused by career indecision could be an underlying factor in the continued interest in the field. Despite the diversity of theoretical approaches to career indecision, research has revealed substantial overlap in the measuring instruments of the construct (De Bruin & Du Toit, 1997).

The purpose of this study was to address career indecision amongst prospective first year university students and to achieve the following outcomes:

- Contribute to the services provided by the Centre for Student Counselling at the University of Stellenbosch.

- Address the need for a group programme aimed at uncertain or undecided prospective first year students.
- Improve the quality of career development counselling provided by the university.
- Contribute to a reduction in the number of applications for re-admission and changes of course at the university.

Career indecision is regarded as a complex, multidimensional construct represented by different forms of indecision (De Bruin & Du Toit, 1997; Fuqua et al., 1988; Fuqua & Newman, 1989; Jones, 1989; Larson, Heppner, Ham & Dugan, 1988; Lucas, 1993; Newman et al., 1990; Rojewski, 1994; Savickas, 1995; Stead, Watson & Foxcroft, 1993; Vondracek, Hostetler, Schulenberg, & Shimizu, 1990; Wanberg & Muchinsky, 1992). At present researchers do not concur regarding the categories or types of indecision, and various dimensions of career indecision have been emphasised by different researchers (Cohen et al., 1995; Fuqua et al., 1988; Gordon, 1998; Holland & Holland, 1977; Jones, 1989; Larson et al., 1988; Lopez & Andrews, 1987; Miller, 1993; Newman et al., 1990; Wanberg & Muchinsky, 1992).

Callahan and Greenhaus (1992) stated that in an attempt to isolate different types of career indecision, researchers have distinguished between developmental indecision, which arises from limited experience and knowledge, and chronic indecision (also referred to as indecisiveness), which reflects a more permanent inability to form a career decision. Gordon (1998) supported previous suggestions that the counselling of a developmentally undecided client differs in process and outcome from that of a chronically indecisive client (Fuqua & Hartman, 1983; Fuqua et al., 1988; Heppner & Hendricks, 1995; Holland & Holland, 1977; Larson et al., 1988; Salomone, 1982; Schumrum & Hartman, 1988; Serling & Betz, 1990; Stead, 1988).

In addition to the distinction between indecision (developmental indecision) and indecisiveness (chronic indecision), or an undecided and an indecisive client, researchers also advocate differential counselling processes for various categories of undecided clients. Undecided clients cannot be regarded as a homogenous group, and no single counselling programme is likely to meet the diverse needs of the individuals who are undecided on a career (Callahan & Greenhaus, 1992; Cohen et al., 1995; Fuqua & Hartman, 1983; Gordon, 1998; Jones, 1989; Larson et al., 1988; Lucas, 1993; McAuliffe,

1991; Newman et al., 1990; Rojewski, 1994; Stead, 1988; Vondracek et al., 1990; Wanberg & Muchinsky, 1992). Counsellors should therefore use their clinical intuition and clinical methods to determine the nature of indecision of the individual and the type of intervention required (Schumrum & Hartman, 1988; Vondracek et al., 1990).

Although the term career indecision has received criticism due to the negative societal connotations of being undecided (Krumboltz, 1992) and because it implies a negative description of the process of decision-making and choice (Hall, 1992; Krumboltz, 1992) the term retains its credibility. Greenhaus and Callahan (1992) refuted the criticism mentioned by stating that researchers of career indecision have been aware of and recognised the connotations and limitations of their concepts and terms for many years. Developmental indecision amongst students is viewed as a wholesome state, spurring the individual on to increased exploration and goal setting (Callahan & Greenhaus, 1992; Fuqua & Hartman, 1983; Holland & Holland, 1977; Salomone, 1982).

Furthermore, not all individuals who are undecided on a career experience anxiety or concern at their indecision. Some undecided students neither want nor need assistance, and will cope with their decisions when reality demands it of them (Holland & Holland, 1977). Being undecided might represent a profound philosophical perspective and open-mindedness, which may be regarded as a virtue. Considering many options, looking for alternatives and avoiding premature foreclosure constitute sensible career decision-making strategies (Hall, 1992).

There are many valid reasons for delaying a career decision, and it must not be assumed that all undecided individuals are uncomfortable and motivated to participate in an intervention (Jones, 1989). According to Newman et al. (1990) a commitment to a premature career choice might prove to be expensive in both human and economic terms. Baird (1968) stated that gifted students or students with high intellectual abilities may delay making a career choice as their abilities allow them many alternatives. However, such individuals may be assisted in making career choices by means of developmentally appropriate above-level assessments (Achter, Lubinski & Benbow, 1996). Gelatt (1989) advocated an attitude of positive uncertainty in making decisions, whereby clients feel uncertain regarding the future, yet optimistic about their uncertainty.

Identifying chronic indecision (indecisiveness) is not a simple task, and it has been suggested that the term may need to be reconceptualised (Callahan & Greenhaus, 1992). According to Callahan and Greenhaus (1992) the presence of chronic indecision has been inferred by different researchers through the presence of a few cues, such as the absence of a career decision over time (Hartman, Fuqua & Hartman, 1983), multiple changes in career decisions (Hartman, Fuqua, Blum & Hartman, 1985), high scores on the Career Decision Scale (Hartman, Fuqua & Jenkins, 1986), and relationships between trait anxiety, identity and career indecision (Hartman et al., 1985). Fuqua and Hartman (1983) maintained that the most salient evidence of chronic indecision in students was high levels of anxiety; while Tokar, Fischer and Subich (1998) contended that neuroticism underlies chronic indecision. Those individuals exhibiting chronic indecision may benefit from individual counselling where the focus is on personality and reducing anxiety, as opposed to career decision-making (Fuqua & Hartman, 1983; Schumrum & Hartman, 1988; Stead, 1988; Vondracek et al., 1990).

Although an awareness of chronic indecision is necessary for a comprehensive understanding of the constructs relevant to this study, the identification of chronic indecision was not deemed necessary by the researcher. Tinsley (1992) regarded the lack of theory on the nature of indecision as problematic in determining whether and under which circumstances chronic indecision exists. Fuqua and Hartman (1983) observed that there was no satisfactory method of identifying chronicity in career indecision. Salomone (1982) warned against labelling young adults under the approximate age of 25 years, as chronically indecisive. In accordance with developmental theories, it is natural and expected that adolescents and young adults may be undecided on a career.

With regard to career interventions for undecided clients, De Bruin and Nel (1996) defined career counselling as the interactional process whereby a person is helped towards greater career maturity, the choice of a career and further career development. The term group counselling implies procedures which allow therapeutic intervention to several or many individuals collectively (Isaacson & Brown, 1997). Hall (1992) maintained that it is difficult for individuals who are so-called decided to have clarity on whether or not they are committed to career goals. Career counselling should not only be limited to those

who are career undecided. Those students who have decided on a career are also in need of career guidance (Gordon, 1998; Jones, 1989; Newman et al., 1990).

According to Jones, Gorman and Schroeder (1989) the need amongst university students for assistance in selecting a career and an academic major is well established. Orndorff and Herr (1996) confirmed that research indicates a comprehensive and intense need for career planning and guidance amongst high school and university students, with the choice of a career and a major being priorities.

In an institution which serves large numbers of people, such as a university, it may be preferable to offer interventions such as career counselling to groups, as opposed to only individuals. In the United States of America it has been a common practice for several years to provide career assistance to college students through credit courses (McAuliffe, 1991). In career classes large numbers of students are taught decision-making skills, and assisted in gaining accurate information regarding themselves and the world of work (McAuliffe, 1991). Within the South African context, Beerlall (1997) stated that effective career development programmes should be compulsory in the university curriculum, and that all first-entry students should have career counselling before commencing their academic year.

According to Fretz (1981) and McAuliffe (1991) there is evidence that group career treatments generally produce better treatment outcomes than individual career counselling. A study by Oliver and Spokane (1988) revealed that class interventions were the most effective of those investigated, but required the greatest number of intervention hours. These researchers state that increasing the time period of an intervention increases the favourability of the outcome, and they caution against premature termination.

Results of research by Mawson and Kahn (1993) indicated that clients placed a high value on both cognitive and affective elements of group process in career counselling groups. The clients credited group process factors for making specific contributions to their career planning and goal setting. Group process may be utilised in career interventions in the following ways:

- Counsellors can present career material in a manner which allows clients to generate powerful emotions, and to explore career decision as a process which affects all life areas.
- Counsellors can normalise emotions and encourage clients to support each other by sharing feelings, stories and feedback.
- Counsellors can ensure that a balance is maintained between cognitive factors and affective factors through the selection of exercises, sequencing of activities, and structuring of client participation. The maturation of a career group through its developmental stages will thus be enhanced (Mawson & Kahn, 1993).

Whereas Isaacson and Brown (1997) acknowledged the benefits of group career counselling, they also noted certain potential disadvantages. Care must be taken to ensure that the advantages are utilised and the disadvantages avoided, for example, clients should be allocated to groups with others who are at the same developmental level (Isaacson & Brown, 1997). Niles, Lewis and Hartung (1997) affirmed the relative homogeneity of adolescent career development, the inference being that group career counselling may be conducted effectively amongst adolescents and young adults.

Researchers thus appear to concur that the majority of individuals would benefit from career counselling, including those who have decided on a career. The benefits of such counselling appear evident at both individual and group levels. However, it would appear that the counselling is most advantageous when it is specific to the needs of an individual or a particular subgroup.

2. THEORETICAL FRAMEWORK

While the construct of career decision-making has been discussed and researched extensively, research of career indecision has been comparatively atheoretical (Tinsley, 1992). Tinsley (1992) advocated relating research on career indecision to the decision-making process in order to develop a theoretical context and to advance research on these constructs.

Fuqua and Hartman (1983) mentioned the predominance of the developmental approach to career indecision, and this model has been well supported by researchers (Ginzberg,

Ginsburg, Axelrad & Herma, 1951; Gottfredson, 1981, 1996; Greenhaus & Callahan, 1992; Hall, 1992; Krumboltz, 1993; Salomone, 1982; Skorikov & Vondracek, 1997; Super, 1980). According to Jepsen (1984) the majority of vocational behaviour theorists and researchers appear to subscribe to some variation of the developmental viewpoint.

Developmental theories emphasise the biological, psychological, sociological and cultural factors which influence career choice, adjustment to a career, changes in career, and withdrawal from careers (Isaacson & Brown, 1997). Factors which may influence the decision-making process include personal characteristics, the developmental tasks to be accomplished, and the task and context conditions in which the decision is made (Tinsley, 1992). Maturation is regarded as a central process in career development (Niles, 1998). In deciding on a career, individuals may progress through stages of pre-awareness, awareness, planning (exploration and crystallisation), commitment and implementation. In addition, the cyclical or recursive nature of the development process also receives recognition within the developmental framework (Ellis, 1993; Tinsley, 1992).

Recent evaluations of the career development theory emphasise the significance of contextual factors, that is the historical, cultural, social, economic and political conditions, in the decision-making process. The focus has shifted from the individual and age-appropriateness, to the interaction between organism and environment, or person and context (Niles, 1997, 1998; Raskin, 1998; Schmitt-Rodermund & Silbereisen, 1998; Stead, 1996; Stead & Watson, 1994; Vondracek & Reitzle, 1998).

Hall (1992) promoted the use of a broad theoretical frame in which the complexity and growth aspects of career decision-making are accommodated. He suggested that the theory of Super would provide such a frame. Super's concept of career stages has had a major influence on career assessment and counselling (Richman, 1993), and his contribution represents an unparalleled legacy in developmental career theory (Isaacson & Brown, 1997; Niles, 1997). Super's Life-Span Life-Space Theory focuses on career development in preference to the concept of occupational choice, advocated by Holland (Super, 1980). Super (1980) defined career development as the emergence of sequences of choices throughout a whole or part of the life span. He regarded the process of career development as developing and implementing occupational self-concepts. The self-concept is the product of the interaction of inherited aptitudes,

physical make-up, opportunity to observe and perform various roles, and evaluations of the extent to which the results of role-playing meet the approval of superiors and peers (Isaacson & Brown, 1997).

A relevant component of the career development approach is the relationship between career indecision and the formation of identity in an individual (Cohen et al., 1995; Davidson & Gilbert, 1993; Goosen, 1995; Vondracek, Schulenberg, Skorikov, Gillespie & Wahlheim, 1995). Making a career choice includes checking the compatibility of an occupation with the individual's self-concept (Super, 1957). According to Galinsky and Fast (1966) one of the most salient means through which identity concerns are expressed is the process of career decision-making.

The theories of Erikson and Marcia provide the basis for the relationship between career indecision and identity (Vondracek et al., 1995). Erikson identified eight stages in the psychosocial development of individuals, and was the first theorist to emphasise the significance of the formation of a personal identity in the development of an individual (Erikson, 1971; Meyer & Van Ede, 1998; Newman & Newman, 1997; Thom, Louw, Van Ede & Ferns, 1998). Marcia attempted to provide an empirical framework for Erikson's theoretical constructs through research on the development and validation of ego-identity status. He distinguished four identity statuses, or modes of resolving the identity issue characteristic of the late adolescent developmental stage. These four identity statuses are identity achievement, identity foreclosure, identity moratorium and identity diffusion (Marcia, 1971, 1980; Newman & Newman, 1997; Thom et al., 1998).

The developmental approach thus provides an appropriate theoretical framework relevant to the constructs and aims of the present research.

3. OVERVIEW OF RESEARCH

3.1 CAREER INDECISION

Schulenberg, Shimizu, Vondracek and Hostetler (1988) reported that it was appropriate to study career indecision amongst university students and adolescents, and stated that efforts to diagnose career indecision should not be based on a unidimensional index.

Fuqua et al. (1988) provided empirical support for the differential diagnosis of career indecision. Betz and Vuyten (1997) found self-efficacy to be the best predictor of career indecision, and outcome expectations the best predictor of exploration intentions. Whiston (1996) stated that career decision-making self-efficacy was positively associated with exploratory behaviours. Raskin (1998) and Vondracek and Reitzle (1998) found that the construct of career maturity was useful in studying adolescents, but had limitations.

A developmental progression was found in the career decidedness of adolescents (Watson & Stead, 1994). In his study amongst white high school pupils, Stead (1988) found career undecidedness to be suggested by an unstable vocational identity, high state and trait anxiety, low work role salience and an external locus of control. Stead et al. (1993) indicated that career indecision was linked to irrational beliefs. Goosen (1995) found a correlation between career indecision, vocational identity and fear of commitment. The result of a study by Beerlall (1997) indicated a significant relationship between educational and vocational indecision. A study by Christie (1997) showed a relationship between dysfunctional career beliefs and career maturity, although the direction of the relationship was unclear. Christie (1997) attributed the unclear direction to the inconsistency of variables in the questionnaires used. De Bruin and Nel (1996) maintained that future research should focus on the efficient use of career information, and the integration of such information and self-knowledge.

3.2 GENDER AND LANGUAGE DIFFERENCES IN CAREER DEVELOPMENT

Research has produced mixed findings regarding gender differences and career development. According to Harren, Kass, Tinsley and Moreland (1978) gender, sex role attitudes and cognitive styles had little direct influence on choice of a university major. Bergeron and Romano (1994) found no gender differences in the relationship between career decision-making self-efficacy, vocational indecision and educational indecision. A study by Rayman, Bernard, Holland and Barnett (1983) on the other hand, indicated a difference between males and females on career courses: females were less knowledgeable about careers, but more receptive to education. Sutherland, Hartman and Blum (1993) concluded that females were more concerned than males with regard to balancing career and family or parental roles. Whiston's (1996) finding that gender differences in career indecision were an important area for investigation, differs from

Fouad's (1994) conclusion that it was unnecessary to investigate further the differences between males and females.

Within the South African context, Stead (1988) found that gender was not related to career decisional states, and De Beer (1989) also found no significant gender differences in her study on the career maturity of adolescents. Watson and Stead (1994) stated that gender was not related to career decidedness, although other studies had produced mixed results. According to Goosen (1995) gender had an influence on fear of commitment, with female university students having a significantly greater fear of commitment than males. Beerlall (1997) found male students to be more decided than female students regarding university majors and vocation. Further research in this area may be beneficial, as gender differences have not been investigated sufficiently in South Africa to establish the relation between gender and career decidedness (Beerlall, 1997; Oosthuizen, 1991; Smith, 1993; Watson & Stead, 1994).

Previous research on the correlation between home language and career indecision appears to be limited. Stead (1988) found Afrikaans-speaking white high school females to be more undecided than their English-speaking counterparts. Beerlall (1997) found the levels of educational and vocational indecision to be high amongst university students of English, Hindi, Tamil, Xhosa and Zulu language groups. Home language may, however, be related to culture (Beerlall, 1997), and the need for culture specificity regarding career indecision and interventions has been emphasised by various researchers (Niles, 1997; Schmitt-Rodermund & Silbereisen, 1998; Stead, 1996).

3.3 CAREER COUNSELLING INTERVENTIONS

Numerous studies have examined the effectiveness of career counselling interventions. Interventions at both individual and group levels have been found to have a positive effect on career development (Barnes & Herr, 1998; Fretz, 1981; Fukuyama et al., 1988; McAuliffe, 1991; Oliver & Spokane, 1988; Rayman et al., 1983; Spokane & Oliver, 1983).

Miller (1993) proposed that some type of diagnosis should be made for career-concerned clients before a decision is made on the appropriate counselling strategy. McAuliffe (1991) promoted the use of techniques such as early assessment of career

indecisiveness, and tailored treatments for subgroups or individuals, to overcome barriers to decision-making in career classes. According to Farmer, Wardrop, Anderson and Risinger (1995) it may be appropriate in career counselling to accommodate the differing, specific needs of males and females. Gati (1990) contended that the career counselling process should include helping the client to structure the decision problem, while Richman (1993) advocated the application of cognitive techniques in career counselling.

In South Africa Naicker (1994a) emphasised that socially disadvantaged clients may require interventions which incorporate their values, beliefs and culture. A shift in perspective may thus be required of career counsellors to a view which can accommodate both the individual values of western models and the collective societal values of the disadvantaged (Naicker, 1994b).

With regard to the timing of career counselling interventions, Stead (1996) stated that interventions during adolescence were preferable, and the numerous prospective university students who present at the Centre for Student Counselling of the University of Stellenbosch for guidance in selecting an occupation or university course, suggest that there is a demand for career counselling amongst such individuals.

4. STATEMENT OF RESEARCH PROBLEMS

The primary aim of this study was to examine the nature of career indecision amongst prospective university students. The prevalence of specific aspects of career development underlying career indecision was investigated, as well as the correlations between these aspects. These relevant aspects are self-information, decision-making, career information, integration of self-information and career information, and career planning. The correlation between career development and the subjects' interest profile was investigated. In addition, the correlations between the aspects of career development and certain biographical variables such as gender, home language, declared career choice and self-reported level of career indecision were also examined.

The exploration of career indecision amongst the target population could then contribute to a secondary aim of the study, addressing the phenomenon of career indecision amongst prospective students. Recommendations may be suggested regarding the

content and process of career counselling, specifically for individuals at the developmental stage known as late adolescence.

In order to obtain a profile of career indecision amongst prospective university students the present study tested four hypotheses. Firstly it was hypothesised that there would be statistically significant correlations between the subjects' scores on the five scales of the Career Development Questionnaire (CDQ). Secondly, there would be a statistically significant correlation between the subjects' scores on the CDQ scales and their stated certainty of career choice, that is subjects with a higher level of career development would rate themselves as more certain of their career choice. Thirdly, there would be no statistically significant correlations between either gender or home language, and any other variable measured. Lastly, there would be statistically significant differences between the high and low interest differentiation groups on the CDQ scores.

5. METHOD OF RESEARCH

5.1 SAMPLING

Prospective university students were used as subjects in this investigation. The subjects presented voluntarily for career counselling at the Centre for Student Counselling of the University of Stellenbosch between the months of April and July 1999. To create a homogenous group which would facilitate the aims of the present research, all subjects were learners in Grade 12. There were similar numbers of subjects who regarded themselves as career decided as those who regarded themselves career undecided.

The sample consisted of 84 subjects, of which 46 (54,8%) were female and 38 (45,2%) male. The ages of the subjects ranged from 16 years 11 months to 19 years 0 months, with the average age being 17 years 9 months. Afrikaans was the home language of 56 (66,7%) subjects, English of 26 (31,0%) subjects, and French and German of one subject each.

5.2 MEASURING INSTRUMENTS

The Career Development Questionnaire (CDQ), Meyer Interest Questionnaire (MB-10), and a biographical questionnaire compiled by the researcher were used as measuring instruments in the investigation. All questionnaires were presented to the subjects in their choice of English or Afrikaans.

5.2.1 The Career Development Questionnaire (CDQ)

The CDQ, developed and standardised in South Africa by Langley, Du Toit and Herbst, examines five dimensions of career development, namely self-information, decision-making, career information, integration of self-information and career information, and career planning. The purpose of the questionnaire is to determine the readiness of adolescents and young adults to make career decisions. Based on the theoretical underpinnings of the developmental approach, the CDQ is particularly useful in identifying problems which need to be overcome to enable the individual to carry out the career development tasks related to a particular life stage (Langley, Du Toit & Herbst, 1992).

The CDQ consists of 100 items, each offering a choice between two possible answers, "true" or "false". The questionnaire is comprised of five scales according to the dimensions of career development mentioned previously. Each scale consists of 20 items, and a maximum score of 20 for each scale indicates a high level of career maturity (Christie, 1997).

Satisfactory reliability coefficients and validity indexes have been found with regard to university students and secondary school learners, of the language groups English, Afrikaans and African Languages. It is expected by the developers of the questionnaire that the intercorrelations between the various scales would be relatively high - it is assumed that an individual with a certain level of career maturity in one dimension would have a similar level of maturity in other dimensions (Langley et al., 1992).

5.2.2 The Meyer Interest Questionnaire (MB-10)

The MB-10 was compiled in 1993 for the purpose of measuring the interest of learners and students. The questionnaire may be used in the career counselling process to guide learners and students in their choice of school subjects, tertiary-level courses and careers (Meyer, 1993).

The MB-10 consists of 360 items, representing ten interest fields which correspond to general occupational categories. An indication of an individual's interest in a particular field is obtained from the number of times that he prefers the items representative of that field over items of other interest fields (Meyer, 1993).

The reliability of the MB-10 was confirmed using the methods of internal consistency and item analysis; and the validity was established for the groups secondary school learners and first-year university students (Meyer, 1993).

In the interpretation of MB-10 scores it may be expected that individuals who are more certain of their interest preferences, indicated by a clearly differentiated interest profile, will have a higher level of career maturity and decidedness than those who are unsure of their preferences. It was thus hypothesised by the researcher that there would be a correlation between the MB-10 interest profile differentiation or range, and career development (as measured by the CDQ) of subjects.

5.2.3 The Biographical Questionnaire

A biographical questionnaire was compiled by the researcher to obtain the following additional information relevant to the study: gender, home language, chronological age, school grade, declared career choice, and stated level of career indecision. The questionnaire is included as Addendum A. Newman et al. (1990) stated that the use of self-reported perceptions of career status was effective and valid in career counselling, and produced meaningful results in a study on career indecision subtypes.

In gathering the information on declared career choice, subjects were required to name the career they had chosen or were considering. Subjects were not provided with a limited number of options, but were instead permitted to list the career of their free choice.

5.3 PROCEDURE

The testing of subjects took place under the direction of the Senior Psychometrist at the Centre for Student Counselling of the University of Stellenbosch, from April to July 1999. Individuals in Grade 12 who had presented for career counselling voluntarily completed the questionnaires, which were available in English and/or Afrikaans. Subjects were informed that the information gathered would be regarded as confidential.

Instructions were explained and questions answered by the psychometrist; and the questionnaires were marked by the psychometrist and the researcher.

5.4 STATISTICAL TECHNIQUES

The statistical procedures used consisted of both descriptive statistics and inferential statistics. Descriptive statistics were deemed necessary to summarise the results and convey the findings effectively; while inferential statistics provided insight into the degree of certainty with which predictions can be made regarding obtaining the same results in future research (Saslow, 1982).

According to Howell (1989) nonparametric tests may be defined as statistical tests which do not rely on parameter estimation or precise distribution assumptions. The major advantages of utilising such statistical tests is that they do not rely on seriously restrictive assumptions regarding the sampled population, and they offer a test of differences in central tendency which are not affected by a few extreme scores (Du Toit, 1985; Howell, 1989).

While both Pearson's product-moment correlation and Spearman's correlation for ranked data produced similar statistical results, the researcher elected to interpret the results in the form of Spearman's correlation for ranked data. One variable measured, the certainty

of career choice, was an ordinal ranked scale and Spearman's correlation for ranked data would thus provide a robust measure for the data.

The Mann-Whitney test was applied to compare the central tendency of two variables, namely interest profile differentiation or range, and CDQ scores. The Mann-Whitney test does not require that the population measures be intervally scaled or that the population be assumed to be normally distributed (Saslow, 1982). The correction of scores for tied ranks was included in the statistical procedures. The Central Limit Theorem specifies the nature of the sampling distribution of the mean. If the population is skewed, a sample size of 30 or more is required for the mean to closely approximate a normal distribution (Howell, 1989). The Mann-Whitney test thus provided a robust measure for the present research, and the results are not invalidated by a skewed population.

6. RESULTS

6.1 RELATIONSHIP BETWEEN THE FIVE SCALES OF THE CDQ

The mean scores and standard deviations of the scales of the CDQ appear in Table 1 (N=84). Each scale has a maximum score of 20.

Table 1 Mean Scores and Standard Deviations of the Scales of the CDQ

CDQ Scales	Mean	Std Deviation
Self-Information	15,08	3,28
Decision-Making	14,49	3,62
Career Information	12,10	4,08
Integration of Self-Information and Career Information	15,83	2,96
Career Planning	13,32	2,89

If the guidelines of Langley et al. (1992) for interpreting CDQ scores are applied to the mean scores indicated in Table 1, the following comments may be made with regard to the mean scores: the scores of the scales Self-Information, and Integration of Self-Information and Career Information suggest adequate skills in these areas; while the scores of the scales Decision-Making, Career Information and Career Planning suggest

that these skills can be improved. According to Langley et al. (1992) if a subject scores three marks lower than the group mean score for a scale, then career counselling is recommended. If a subject scores three marks higher than the group mean score for a scale, then he has reached an acceptable level of career maturity.

Table 2 indicates Spearman's correlation coefficient with regard to the five scales of the CDQ.

Table 2 Spearman's Correlations between the Scales of the CDQ

	SI	DM	CI	ISC	CP
Self-Information (SI)	1,000	0,680*	0,407*	0,675*	0,400*
Decision-Making (DM)	0,680*	1,000	0,537*	0,714*	0,555*
Career Information (CI)	0,407*	0,537*	1,000	0,565*	0,621*
Integration of Self-Information and Career Information (ISC)	0,675*	0,714*	0,565*	1,000	0,631*
Career Planning (CP)	0,400*	0,555*	0,621*	0,631*	1,000

*p<0,01

Table 2 indicates that there were moderate to high positive correlations between all five scales of the CDQ (p<0,01). These findings are consistent with hypothesis 1 stated in section 4, Statement of Research Problems, that there would be a statistically significant correlation between the five scales.

6.2 RELATIONSHIP BETWEEN CDQ SCALES AND STATED CERTAINTY OF CAREER CHOICE

Figure 1 provides a graphic representation of the distribution of the variable stated certainty of career choice.

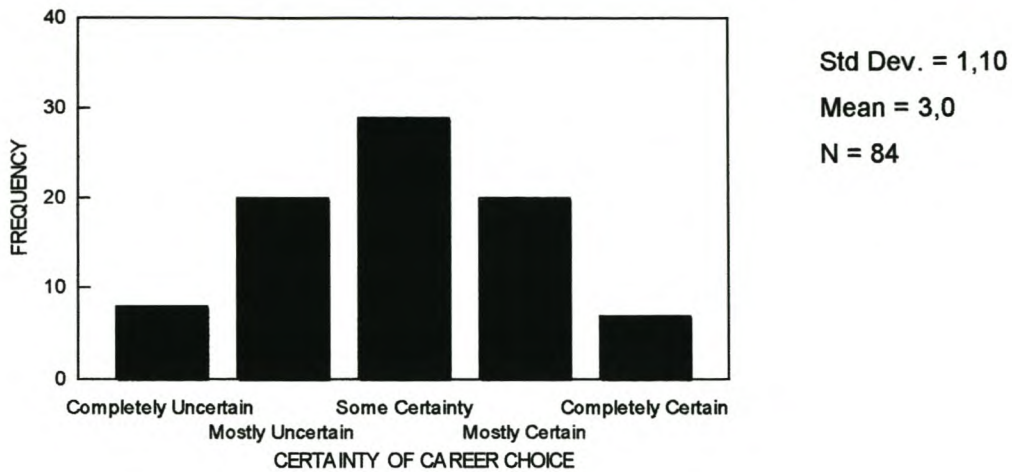


Figure 1 The Distribution of Subjects' Stated Certainty of Career Choice

The distribution appearing in Figure 1 is a characteristic normal distribution. Figure 1 indicates that 8 subjects (9,5%) classified themselves as completely uncertain; 20 subjects (23,8%) classified themselves as mostly uncertain; 29 subjects (34,6%) indicated that they had some certainty; 20 subjects (23,8%) classified themselves as mostly certain; and 7 subjects (8,3%) classified themselves as completely certain of their career choice. These scores may be simplified into a distinction of 2 categories, 42 subjects (50%) who classified themselves as predominantly uncertain of their career choice, and 42 (50%) who classified themselves as predominantly certain.

Spearman's correlation coefficients for the relationship between the subjects' CDQ scores and their stated level of certainty of career choice appear in Table 3.

Table 3 Spearman's Correlations Between CDQ Scales and Certainty of Career Choice

	Stated Certainty of Career Choice
Self-Information	0,416*
Decision-Making	0,564*
Career Information	0,483*
Integration of Self-Information and Career Information	0,497*
Career Planning	0,426*

* $p < 0,01$

Table 3 suggests that there were statistically significant positive correlations of a moderate degree between the subjects' scores on the scales of the CDQ and their stated level of certainty of career choice ($p < 0,01$). These results are consistent with hypothesis 2 stated in section 4, Statement of Research Problems, that is that subjects with a higher level of career development would rate themselves as more certain of their career choice.

6.3 CORRELATIONS BETWEEN GENDER, HOME LANGUAGE, CDQ SCALES, INTEREST PROFILE RANGE, AND CERTAINTY OF CAREER CHOICE

Spearman correlation coefficients between home language and gender, certainty of career choice, the CDQ scales, declared choice of career and interest profile range or differentiation appear in Table 4.

Table 4 Spearman Correlations between Home Language and Gender, Certainty of Career Choice, CDQ Scales, Declared Choice of Career and Interest Profile Differentiation

	Home Language
Gender	0,183
Certainty of Career Choice	-0,141
Self-Information	-0,139
Decision-Making	-0,004
Career Information	-0,033
Integration of Self-Information and Career Information	-0,102
Career Planning	0,015
Choice of Career	0,124
MB-10 Grouping	0,000

Table 4 indicates that there were no statistically significant correlations between home language and gender, certainty of career choice, the CDQ scales, declared choice of career and interest profile range or differentiation. These findings are in accordance with hypothesis 3 stated in section 4, Statement of Research Problems.

Spearman correlation coefficients between gender and certainty of career choice, the CDQ scales, declared choice of career and interest profile range or differentiation appear in Table 5.

Table 5 Spearman Correlations between Gender and Certainty of Career Choice, CDQ Scales, Declared Choice of Career and Interest Profile Differentiation

	Gender
Certainty of Career Choice	-0,137
Self-Information	-0,227
Decision-Making	-0,126
Career Information	-0,074
Integration of Self-Information and Career Information	0,011
Career Planning	-0,084
Choice of Career	0,412*
MB-10 Grouping	0,033

* $p < 0,01$

Also in accordance with hypothesis 3, there were no statistically significant correlations between gender and certainty of career choice, the CDQ scales and interest profile range or differentiation. There was, however, a statistically significant correlation between gender and stated choice of career ($p < 0,01$). As the stated choices of career were ranked in a random order, with there being no pattern or grouping of careers, this correlation is unlikely to hold any clinical significance for the career counselling process or the investigation of career indecision. This extrapolation may be made in accordance with Gehlbach's (1993) statement that statistical significance should not necessarily be equated with clinical importance.

The statistically significant correlation between gender and career choice does not confirm hypothesis 3 stated in section 4, Statement of Research Problems.

6.4 DECLARED CAREER CHOICE

The declared career choices of subjects are listed, in random order, in Addendum B. There were certain career choices which received more support than others from subjects. These popular choices were Psychologist, chosen by 10 subjects (11,9%); Chartered

Accountant and Lawyer, chosen by 8 subjects respectively (9,5%) and Business Man/Woman, chosen by 7 subjects (8,3%) (N = 84).

6.5 DIFFERENCES BETWEEN CDQ SCORES OF HIGH AND LOW INTEREST DIFFERENTIATION GROUPS

A graphic representation of the MB-10 interest profile range appears in Figure 2. The range consists of the difference between the subjects' highest interest score and their lowest interest score on the MB-10 Interest Questionnaire.

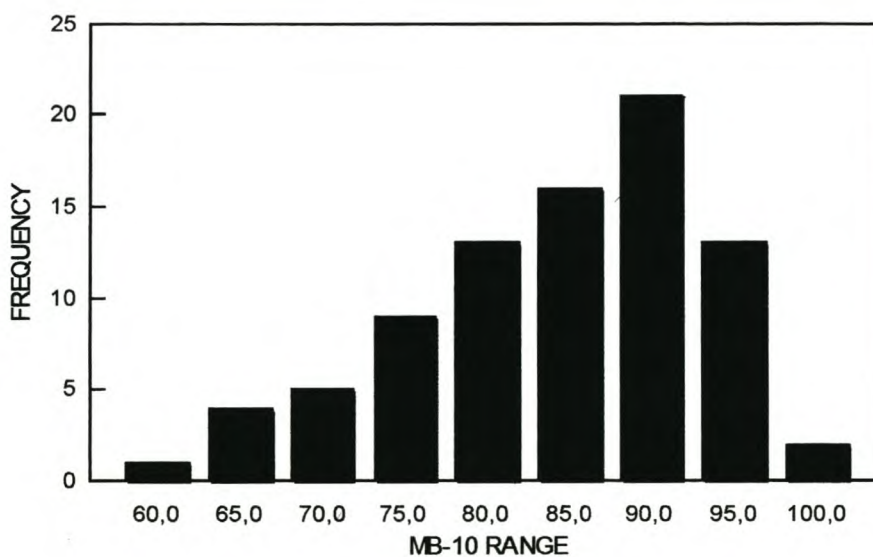


Figure 2 MB-10 Interest Profile Range of Subjects

The minimum range score was 59, while the maximum was 98, on a scale from 0 to 100 (N = 84). There were 27 subjects (32,1%) with scores beyond the range of the standard deviation of 9,07, that is 12 subjects (14,3%) with scores above this threshold and 15 subjects (17,9%) with scores below. These two groups were labelled the high differentiation group and the low differentiation group.

Tables 6 and 7 provide an indication of the CDQ scores of the high differentiation MB-10 group (N = 12) and the low differentiation MB-10 group (N = 15).

Table 6 CDQ Scores of the High Interest Differentiation Group

	SI	DM	CI	ISC	CP
N	12	12	12	12	12
Mean	16,42	16,00	12,67	17,25	14,08
Std Deviation	2,31	2,98	3,06	1,86	2,94
Minimum	12	10	7	15	8
Maximum	20	20	18	20	18

SI = Self-Information
 DM = Decision-Making
 CI = Career Information
 ISC = Integration of Self-Information and Career Information
 CP = Career Planning

Table 7 CDQ Scores of the Low Interest Differentiation Group

	SI	DM	CI	ISC	CP
N	15	15	15	15	15
Mean	13,73	12,27	10,20	13,60	12,40
Std Deviation	3,53	3,95	4,09	3,79	3,22
Minimum	4	3	4	4	8
Maximum	20	20	19	20	20

SI = Self-Information
 DM = Decision-Making
 CI = Career Information
 ISC = Integration of Self-Information and Career Information
 CP = Career Planning

Tables 6 and 7 suggest that there were differences between the CDQ scores of those subjects with a high interest differentiation or range, and those with a low interest differentiation or range. These differences are represented graphically in Figure 3.

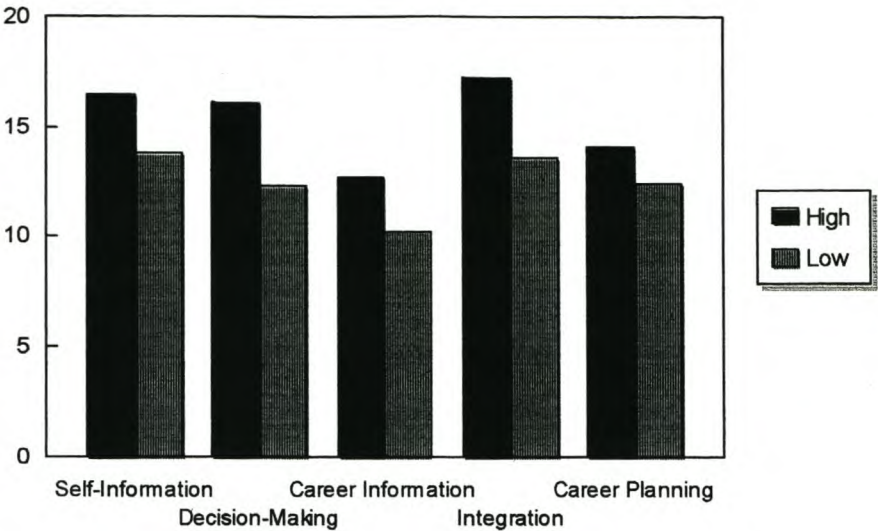


Figure 3 Mean Scores on the CDQ of the High Interest Differentiation and Low Interest Differentiation Groups

Figure 3 indicates that those subjects with greater interest differentiation had higher scores on all five scales of the CDQ than those subjects with lower interest differentiation.

The results of the Mann-Whitney test for interest differentiation against the CDQ scales appear in Table 8.

Table 8 Mann-Whitney Test Statistics for Interest Differentiation Against CDQ Scales

	CDQ Scales				
	SI	DM	CI	ISC	CP
Mann-Whitney U	45,000	39,000	57,500	30,000	57,000
Wilcoxon W	165,000	159,000	177,500	150,000	177,000
Z	-2,214	-2,504	-1,594	-2,961	-1,623
Asymp. Sig (2-tailed)	0,027	0,012	0,111	0,003	0,105

Table 8 suggests that there was a statistically significant difference between the high differentiation and low differentiation interest groups with regard to the CDQ scales of Self-Information (SI) ($p=0,027$), Decision Making (DM) ($p=0,012$) and Integration of Self-Information and Career Information (ISC) ($p=0,003$). There was no statistically significant difference with regard to the scales Career Information (CI) and Career

Planning (CP) ($p>0,05$). This finding is mostly in accordance with hypothesis 4 stated in section 4, Statement of Research Problems.

7. DISCUSSION AND CONCLUSION

The primary aim of the present study was to examine the nature of career indecision amongst prospective university students. The results of the study suggest that a degree of career indecision is prevalent amongst prospective students. From the sample population of 84 prospective students, 42 subjects (50%) described themselves as predominantly uncertain of a career choice. This outcome supports Beerlall's (1997) finding that the levels of educational and vocational indecision amongst first-entry university students were high, as well as previous research suggesting the need for career counselling amongst university students (Jones, Gorman & Schroeder, 1989; Orndorff & Herr, 1996).

In examining the nature of career indecision amongst prospective students, the CDQ was administered to determine the level of career maturity of the subjects. The results of this test provided insight into specific deficits with regard to career development, which might hinder the subjects from making a career choice. These results also provided valuable information regarding the focus of career counselling for prospective students.

Based on the results of the CDQ, it may be proposed that prospective students' skills regarding Decision Making, Career Information and Career Planning require improvement. While the mean scores of the scales Self-Information, and Integration of Self-Information and Career Information fell within the descriptive range of adequate, they were both at the lower end of this range. It is therefore suggested that prospective students may benefit from an improvement in these skills also, and that an attempt should be made to develop all of the skills mentioned above through career counselling.

The results of the study furthermore suggest that those individuals whose interests are more defined and differentiated, are more advanced with regard to career development, as measured by the five scales of the CDQ. There were statistically significant differences between those individuals whose interests are more defined and those whose interests are less defined on the scales Self-Information, Decision-Making, and Integration

of Self-Information and Career Information. Career counsellors may therefore expect those prospective students with clearly defined interests to have significantly greater self-information, and more developed decision-making skills as well as skills to integrate self-information and career information, than those prospective students with a flatter or less defined interest profile.

No statistically significant correlations were found between gender or home language on the one hand, and level of career development, certainty of career choice and differentiation of interests on the other. This finding suggests that career indecision is not limited to a specific group of prospective students, but is present to a similar extent in male and female individuals with Afrikaans or English as their home language. The finding regarding the relationship between gender and other variables supports the research findings on gender of De Beer (1989), Stead (1988) and Watson and Stead (1994), but differs from Beerlall's (1997) conclusion that male students were more decided than females with regard to their choice of vocation and majors.

A statistically significant correlation was present between gender and career choice. However this finding was deemed to have no clinical relevance, due to the random order of the declared career choices.

The finding of Newman et al. (1990) that the use of self-reported perceptions of career status is effective and valid in career counselling is supported by the statistically significant correlation between the CDQ scales and certainty of career choice. The clinical significance of this result for the career counsellor is that individuals are likely to have a reliable impression of their own level of career development and career indecision.

The correlations found between the scales of the CDQ (Self-Information, Decision-Making, Career Information, Integration of Self-Information and Career Information, and Career Planning) compare favourably with the assumption and subsequent research of Langley et al. (1992) indicating a relatively high correlation between scales. It can thus be expected that an individual with a certain level of career maturity in one dimension would have a similar level of career maturity in other dimensions. The implications for career counselling are that individuals are likely to benefit from counselling which covers the broad spectrum of career development, as

opposed to specific elements thereof; and that group career counselling could be facilitated with relative ease as individuals at the developmental stage of late adolescence are likely to have a similar level of career maturity with regard to all dimensions of career development.

The source of career indecision amongst prospective university students at the late adolescent developmental stage thus appears to lie in various aspects of career development as opposed to a single developmental task to be mastered. These relevant aspects of career development are self-information, decision-making, career information, integration of self-information and career information, and career planning. This finding contributes to a secondary aim of the study, namely addressing the phenomenon of career indecision amongst prospective university students. Recommendations regarding the content and process of career counselling for prospective university students will follow.

According to the present study, 42 subjects (50%) rated themselves as predominantly certain of their career choice. The fact that these subjects presented for career counselling voluntarily suggests that even prospective students who feel certain of their career choice and have a relatively high level of career development, may seek confirmation from expert sources. This statement is in agreement with previous research findings that career counselling should not be limited only to those individuals who are career decided (Gordon, 1998; Hall, 1992; Jones, 1989; Newman et al., 1990). The conclusion may be drawn that career counselling would therefore be beneficial to those who are undecided on a career and have a lower career maturity as well as those who are decided on a career and have a higher career maturity. This postulation bodes well for the implementation of group career counselling, taking into account the number of prospective students who would benefit from career counselling.

The conclusions drawn from the results of the present study appear to be in accordance with the theoretical underpinnings of the developmental framework. In accordance with the developmental framework, the subjects may be described as being at the exploratory stage of career development, which accounts for the relatively high proportion of career indecision found in the study. As the subjects fall into the developmental stage of late adolescence, it may be extrapolated that the career indecision present may be described

as developmental indecision, as opposed to chronic indecision. Furthermore, the significant positive correlation between the scales of the CDQ supports the relationship advocated by the developmental approach between career indecision and identity. Also in accordance with the developmental approach, the results of the present study emphasise maturation as a central process in career development. One component of the career development theory not addressed by the present study was the influence of contextual factors on the decision-making process.

On the basis of the findings of the present study, the following recommendations may be made:

- A career counselling programme should be established for prospective students at the University of Stellenbosch. It is suggested that the programme be offered in the form of group career counselling. This programme may be implemented during the year prior to enrolment, and during the orientation period for first-year students. The programme may be instrumental in reducing the high psychological and financial costs associated with career indecision by De Bruin and Du Toit (1997).
- An attempt should be made to allocate prospective students to groups according to their level of career development, possibly by means of an initial assessment which may include instruments such as the Career Development Questionnaire (CDQ) and a biographical questionnaire. This suggestion is in keeping with previous proposals advocating assessment prior to career interventions (McAuliffe, 1991; Miller, 1993; Schumrum & Hartman, 1988; Vondracek et al., 1990).
- It is recommended that the group career counselling programme be optional at initial implementation, for those individuals who wish to participate. However, it is suggested that the implementation of a compulsory career counselling course for first-year students be investigated by the University of Stellenbosch.
- The following aspects of career development identified by Langley et al. (1992) should each be addressed during the course of the career counselling programme: self-knowledge, effective decision-making, information on careers and knowledge of the occupational world, integration of self-knowledge and knowledge of the

occupational world, implementation of knowledge in career planning. Furthermore, the programme content should be drawn up taking into account the historical, cultural, social, economic and political contextual factors relevant to the prospective students. It should also be borne in mind that the values, beliefs and culture of socially disadvantaged individuals may need to be incorporated into such a programme where applicable. The recommendations of previous researchers (Naicker, 1994a; Niles, 1997, 1998; Raskin, 1998; Schmitt-Rodermund & Silbereisen, 1998; Stead, 1996; Stead & Watson, 1994; Vondracek & Reitzle, 1998) could thus be accommodated.

The results of the present study should be considered within the context of certain limitations. The sample population consisted predominantly of Afrikaans and English speaking subjects, with no representation of the African languages. The subjects were all individuals who presented for career counselling, which may have resulted in a more homogenous group than would otherwise be the case. The level of career indecision stated by subjects was not validated by empirical measurement. Generalisation of the results should therefore be restricted.

In conclusion, it appears that the present study has endorsed certain previous findings regarding career indecision, and, it is hoped, also provided some initial findings and recommendations with regard to career indecision amongst the specific population of prospective university students. In referring to boundaries, American philosopher Thoreau (in Wyman & Son, 1998) stated that "the frontiers are not east or west, north or south, but wherever a man fronts a fact" (p.8). It is hoped that this study might provide a scientific contribution towards extending the frontiers of career indecision, a construct which has been much researched yet to date not comprehensively mastered.

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ADDENDUM A**BIOGRAPHICAL INFORMATION / BIOGRAFIESE INLIGTING**

NAME / NAAM:.....

DATE / DATUM:.....

AGE / OUDERDOM:YEARS/JAARMONTHS/MAANDE

GRADE / GRAAD:.....

HOME LANGUAGE / TAAL:.....

GENDER / GESLAG: M F/V

CAREER CHOICE / LOOPBAANKEUSE:

Name the career (not the qualification) you are considering at present. If totally uncertain, write down the options you are considering in order of preference:

Skryf die beroep neer (nie die kwalifikasie nie) wat u op die oomblik oorweeg. As u totaal onseker is, skryf die alternatiewe wat u oorweeg neer, in volgorde van voorkeur.

.....

CERTAINTY OF YOUR CHOICE / SEKERHEID VAN U KEUSE:

Please circle the number which applies to you.

Omkring die nommer wat van toepassing is.

Completely uncertain	Mostly uncertain	Some certainty	Mostly certain	Completely certain
1 2	3 4	5 6	7 8	9 10

ADDENDUM B**THE DECLARED CAREER CHOICES OF SUBJECTS**

<u>Choice of Career</u>	<u>Frequency</u>	<u>Percentage of Sample Population</u>
Career In Advertising	2	2,4
Public Relations Officer	1	1,2
Chartered Accountant	8	9,5
Business Manager	2	2,4
Physiotherapist	2	2,4
Psychologist	10	11,9
Work With Animals	2	2,4
Art Therapist	1	1,2
Legal Advisor	1	1,2
Photographer	2	2,4
Lawyer	8	9,5
Financial Manager	1	1,2
Doctor	2	2,4
Book Keeper	1	1,2
Journalist	4	4,8
Marketing Manager	1	1,2
Occupational Therapist	1	1,2
Teacher	1	1,2
Dietician	1	1,2
Business Man/Woman	7	8,3
Hotel Manager	1	1,2
Caterer	1	1,2
Multimedia Designer	1	1,2
Pilot	1	1,2
Sound Engineer	2	2,4
Computer Network Administrator	2	2,4
Engineer	2	2,4
Dentist	1	1,2
Biologist	1	1,2
Computer Scientist	1	1,2
Farmer	1	1,2
Computer Programmer	1	1,2
Stockbroker	2	2,4
Computer Systems Engineer	1	1,2
Auditor	1	1,2
Entrepreneur	1	1,2
Career In Tourism	2	1,2
Architect	1	1,2
Beauty Therapist	1	1,2
Graphic Designer	2	2,4